AXN(7/8)

Discontinued

Panasonic
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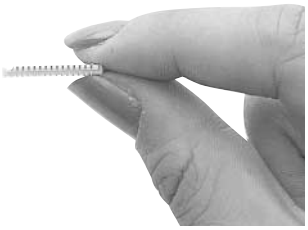
NARROW-PITCH CONNECTORS FOR BOARD-TO-BOARD CONNECTION

NARROW PITCH (1.0mm) CONNECTORS P10 SERIES

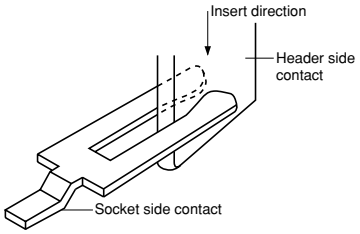


Socket

Header

FEATURES

1. Our contact construction assures high resistance to vibration and impact.

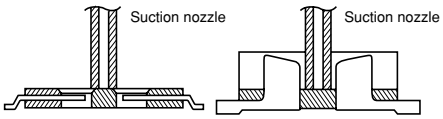


High contact reliability is realized by being resistant against impacts from dropping or vibration when carrying, because an original structure is used in which the socket contact fits around the header contact.

2. Simple lock mechanism offers high contact reliability.

3. Automatic mounting machine is available with an exclusive mounting nozzle.

Using the following types of suction nozzles make the connectors compatible with automatic mounting without the need for suction tape.



4. Porosity treatment applied for improved resistance against corrosion.

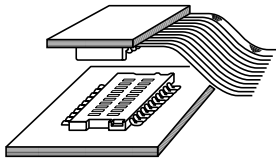
5. Compliance with RoHS' Directive

Environmentally friendly, the connectors' comply with Europe's RoHS' Directive. Cadmium, lead, mercury, hexavalent, chromium, PBB and PBDE are not used.

APPLICATIONS

Laptop computers, video equipment, radio communication, portable terminals, cellular telephones, and other small portable devices.

Suitable for board to FPC connecting.



The simple lock mechanism ensures proper contact.

TABLE OF PRODUCT TYPES

Socket

Header

Mated height		2.0mm	2.5mm
Number of contacts	10	☆	☆
	16	☆	☆
	20	☆	☆
	30	☆	☆

Note:
The standard type comes with positioning bosses. Connectors without positioning boss are available for on-demand production.

ORDERING INFORMATION

AXN □ □□ □ □ □ □

7: Narrow Pitch Connector P10 (1.0 mm pitch) Socket
8: Narrow Pitch Connector P10 (1.0 mm pitch) Header

Number of contacts (2 digits)

Mated height
<Socket>
5: For mated height 2.0 mm and 2.5 mm
<Header>
5: For mated height 2.0 mm
7: For mated height 2.5 mm

Functions
3: With positioning bosses
4: Without positioning bosses

Surface treatment (Contact portion / Terminal portion)
5: Ni plating on base, Au plating on surface / Ni plating on base, Au plating on surface

Packing
J: 1,500 pieces embossed tape and paper reel × 2
P: 1,000 pieces embossed tape and paper reel × 2

PRODUCT TYPES

Mated height	No. of contacts	Part No.		Packing quantity	
		Socket	Header	Inner carton (1-reel)	Outer carton
2.0mm	10	AXN710535J	AXN810535J	Note) J: 1,500 pcs. (recommendation)	Note) J: 3,000 pcs. (recommendation)
	16	AXN716535J	AXN816535J		
	20	AXN720535J	AXN820535J		
	30	AXN730535J	AXN830535J		
2.5mm	10	AXN710535J	AXN810735J		
	16	AXN716535J	AXN816735J		
	20	AXN720535J	AXN820735J		
	30	AXN730535J	AXN830735J		

Notes) 1. In order to reduce the amount of packaging materials used to help protect the global environment, it is recommended that each packaging box contains 1,500 units with the "J" product number suffix. Embossed tape packages containing 1,000 units in the inside boxes (reels) are also available. The latter have the "P" product number suffix. When placing orders, change the "J" suffix to the "suffix P."
2. Regarding ordering units: During production: Please make orders in 1 reel units.
Samples for mounting confirmation: Available in units of 50 pieces. Please consult us. (See "Regarding sample orders to confirm proper mounting" on page 13.)
Samples: Small lot orders are possible. Change the suffix "J" to the suffix "P."
The standard type comes with positioning bosses. Connectors without positioning bosses are available for on-demand production. For this type of connector, please change the 8th digit of the ordering number to "4". ex.: For a 10-contact socket with 2mm mated height: AXN710545J

SPECIFICATIONS

1. Characteristics

Item		Specifications	Conditions
Electrical characteristics	Rated current	0.5A	
	Rated voltage	60V AC/DC	
	Breakdown voltage	250V AC for 1 minute	Detection current: 1mA
	Insulation resistance	Min. 1000MΩ	Using 500V DC megger
	Contact resistance	Max. 50mΩ	Measured based on the HP4338B measurement method of JIS C 5402
Mechanical characteristics	Composite insertion force	Max. 44.1N {4.50kgf} (20 contacts)	
	Composite removal force	Min. 6.67N {0.68kgf} (20 contacts)	
	Holding force for contact	Min. 1.96N {200gf}/1 contact (Socket)	Measures the maximum load in the post axial direction until removal
		Min. 5.88N {600gf}/2 contacts (Header)	
Environmental characteristics	Ambient temperature	–55°C to +85°C	No freezing at low temperatures
	Soldering heat resistance	Max. peak temperature of 245°C	Infrared reflow soldering
		300°C within 5 seconds	Soldering iron
	Thermal shock resistance (header and socket mated)	5 cycles, insulation resistance min. 100MΩ, contact resistance max. 50mΩ	Sequence 1. -55^{0}_{-3}°C, 30 minutes 2. ~ , Max. 5 minutes 3. 85^{+3}_{0}°C, 30 minutes 4. ~ , Max. 5 minutes
	Humidity resistance (header and socket mated)	120 hours, insulation resistance min. 100MΩ, contact resistance max. 50mΩ	Bath temperature 40±2°C, humidity 90 to 95% R.H.
	Saltwater spray resistance (header and socket mated)	24 hours, insulation resistance min. 100MΩ, contact resistance max. 50mΩ	Bath temperature 35±2°C, saltwarter concentration 5±1%
	H_2S resistance (header and socket mated)	48 hours, contact resistance max. 50mΩ	Bath temperature 40±2°C, gas concentration 3±1 ppm, humidity 75 to 80% R.H.
	SO_2 resistance (header and socket mated)	48 hours, contact resistance max. 50mΩ	Bath temperature 40±2°C, gas concentration 10±3 ppm, humidity 90 to 95% R.H.
Lifetime characteristics	Insertion and removal life	20 times	Repeated insertion and removal speed of max. 200 times/hours
Unit weight		Mated height 2mm 20 contacts; Socket: 0.13g Header: 0.17g	

2. Material and surface treatment

Part name	Material	Surface treatment
Molded portion	Heat-resistant resin (UL94V-0)	—
Contact/Post	Copper alloy	Contact portion: Ni plating on base, Au plating on surface Terminal portion: Ni plating on base, Au plating on surface (Except for thick of terminal)

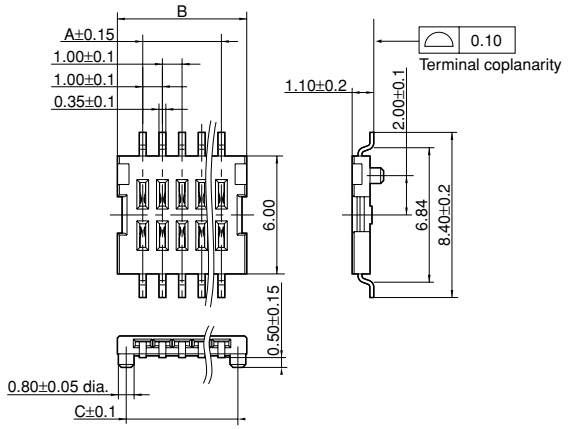
DIMENSIONS

mm General tolerance: ±0.3

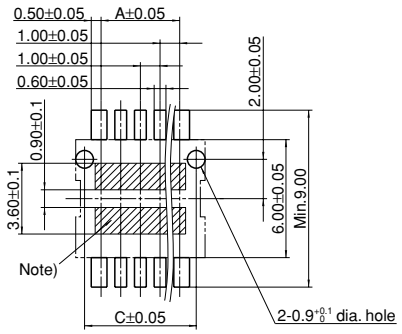
• Socket body

Dimension table (mm)

No. of contacts	A	B	C
10	4.00	6.58	5.68
16	7.00	9.58	8.68
20	9.00	11.58	10.68
30	14.00	16.58	15.68



Recommended PC board pattern
(TOP VIEW)



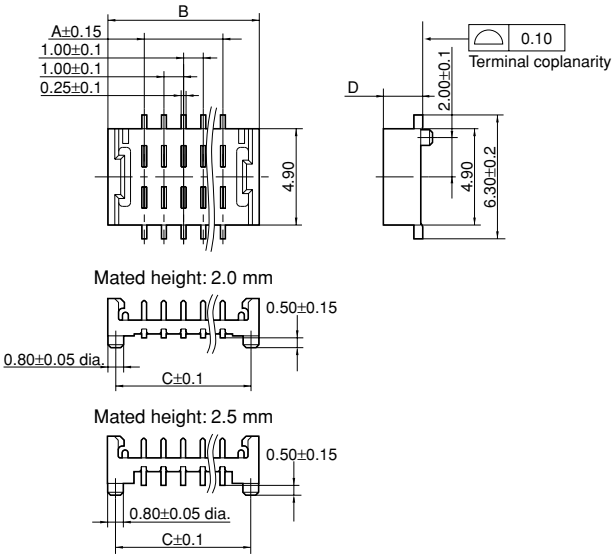
Note) As the metalic part of headers may contact with this area, do not design any wiring pattern in this area.

• Header

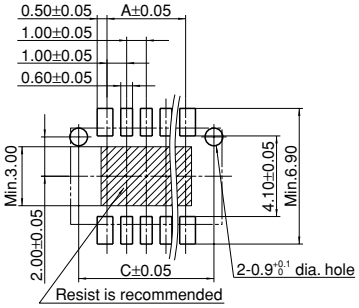
Dimension table (mm)

No. of contacts	A	B	C
10	4.00	7.70	6.88
16	7.00	10.70	9.88
20	9.00	12.70	11.88
30	14.00	17.70	16.88

Mated height	D
2.0mm	2.00
2.5mm	2.50



Recommended PC board pattern
(TOP VIEW)



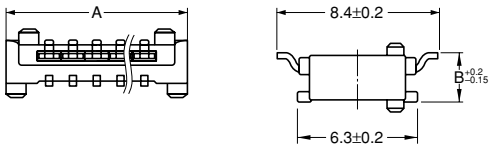
• Socket and header are mated

Dimension table (mm)

No. of contacts	A
10	7.70
16	10.70
20	12.70
30	17.70

Mated height	B
2.0mm	2.0
2.5mm	2.5

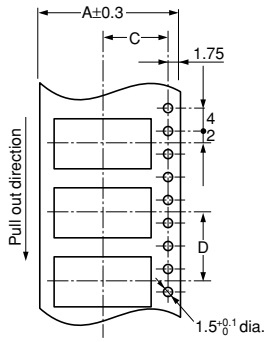
Note) Common for all mated heights.



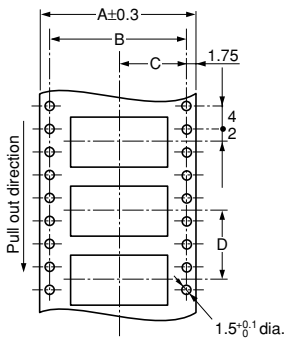
EMBOSSED TAPE DIMENSIONS (unit:mm, Common for respective contact type, socket and header)

• Tape dimensions (Conforming to JIS C 0806-1990. However, some tapes have mounting hole pitches that do not comply with the standard.)

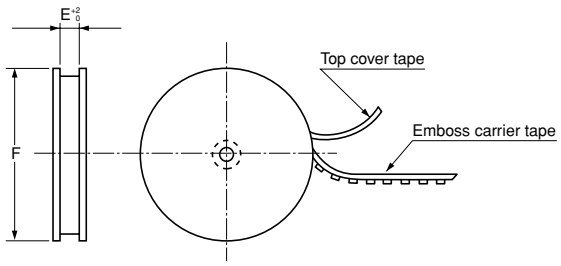
Tape I



Tape II



• Paper reel dimensions (Conforming to JIS C 0806-1990)



Dimension table (mm)

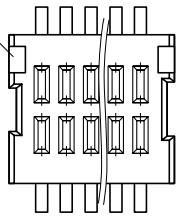
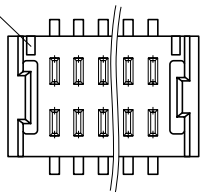
(1) Suffix: J (1 reel, 1,500 pieces embossed tape package)

Type	Type of taping	A	B	C	D	E	F	Quantity per reel
P10 common	Tape I	24.0	—	11.5	12.0	24.4	330 dia.	1,500

(2) Suffix: P (1 reel, 1,000 pieces embossed tape package)

Type	Type of taping	A	B	C	D	E	F	Quantity per reel
P10 common	Tape I	24.0	—	11.5	12.0	24.4	330 dia.	1,000

Connector orientation with respect to direction of progress of embossed tape

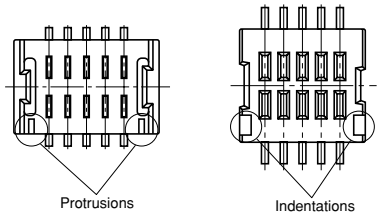
Direction of tape progress / Type	Common for P10
↓	Socket: Indentation  Header: Protrusion 

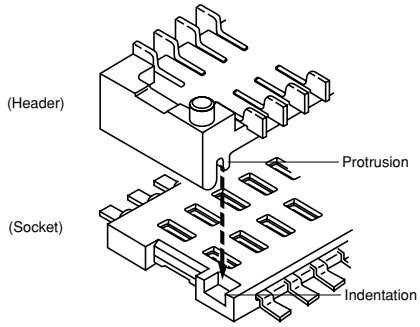
NOTES

Prevention of reverse mating

The socket and header are protected from reverse mating by a molded resin key. Excessive mating force may damage the key, so be sure to match the projections and indentations securely when mating.

(Header) (Socket)





Regarding general notes, please refer to page 12.

For other details, please verify with the product specification sheets.